

CLAIMS

Amend the claims as follows.

1. (Currently Amended) A light guide plate structure comprising:

a light guide plate, comprising at least one light incident surface, a light scattering surface and a light emitting surface, wherein the light incident surface is on a sidewall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, the light emitting surface is on a top surface of the light guide plate, wherein the light scattering surface has a plurality of notches extending up from underneath the bottom surface of the light guide plate; and

a plurality of transparent element structures ~~having first and second surfaces~~ associated with the plurality of notches and having solid side walls continuously extending between first and second surfaces so that the first surfaces are within the plurality of notches and the second surfaces are outside the ~~plurality of notches~~ bottom surface of the light guide plate, wherein a refractive index of the plurality of transparent element structures is different from that of the light guide plate.

2. (Currently Amended) The light guide plate structure of claim 1, wherein the plurality of transparent element structures comprises a rectangular shaped glass or an acrylic material.

3. (Currently Amended) The light guide plate structure of claim 1, wherein:
the plurality of transparent element structures each comprise flat top ends that extend up into the notches above the bottom surface of the light guide plate and flat bottom ends that extend down underneath the bottom surface of the light guide plate ~~is a mesa light guide plate~~;

the plurality of transparent element structures have different sizes;

the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by size; and

the bottom surfaces of the plurality of transparent element structures are substantially coplanar.

4. (Currently Amended) A back light for a display comprising:

a light guide plate structure, comprising:

a light guide plate, comprising at least one light incident surface, a light scattering surface and a light emitting surface, wherein the light incident surface is on a sidewall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, the light emitting surface is on a top surface of the light guide plate, and wherein the light scattering surface has a plurality of notches;

a plurality of solid transparent element structures disposed within the plurality of notches, wherein a refractive index of the plurality of transparent element structures is different from that of the light guide plate and wherein the plurality of transparent element structures includes at least one surface that is outside of the plurality of notches and outside of the light guide plate structure; and

a linear light source next to the light incident surface of the light guide plate.

5. (Previously presented): The back light of claim 4, wherein the plurality of transparent element structures comprises a glass or an acrylic material.

6. (Previously presented): The back light of claim 4, wherein the light guide plate is a mesa light guide plate, the plurality of transparent element structures have different sizes, the plurality of transparent element structures are disposed on the light scattering surface at least partially in sequence by size, and bottom surfaces of the plurality of transparent element structures are substantially coplanar.

7-20 (Cancelled)

21. (Currently Amended) The light guide plate structure of claim 1, wherein the first surfaces are adapted to reflect light incident from the light incident surface, and the second surfaces are adapted to reflect light that has transmitted through the first surfaces.

22. (Currently Amended) The light guide plate structure of claim 1 ~~4~~, wherein the ~~first surfaces are above the light scattering surface and the second surfaces are below the light scattering surface~~ transparent element structures comprise:

flat top ends that insert into the notches above the bottom surface of the light guide plate;

flat bottom ends that extend down below the bottom surface of the light guide plate;
and

parallel side walls that extend from the flat top ends to the flat bottom ends.

23. (Currently Amended) The light guide plate structure of claim 7 ~~4~~, ~~further comprising a diffusion sheet and a brightness enhancement film disposed on the light emitting surface to receive light from the first and second surfaces~~ wherein the notches have rectangular shapes and the transparent element structures have rectangular shapes that sit inside the rectangular shaped notches.

24. (Currently Amended) The back light of claim 4, ~~wherein the at least one surface that is outside of the plurality of notches and outside of the light guide plate structure is reflective~~ 22 wherein the bottom surface extends out away from the light incident surface at an upwardly inclining angle toward the light emitting surface and the bottom surface is located progressively higher up on the parallel side walls of the transparent element structures as the transparent element structures are located farther away from the light incident surface.

25. – 28. (Canceled)

29. (New) A back light module, comprising:

means for attaching a plurality of solid and transparent elements to a bottom surface of a light guide plate wherein the transparent elements have a refractive index different from a refractive index for the light guide plate;

means for scattering a light against the bottom surface of the light guide plate; and

means for emitting the scattered light up through a top surface of the light guide plate.

30. (New) The back light module of claim 29 further comprising means for outputting a linear light source through a light incident surface and against the bottom surface of the light guide plate.

31. (New) The back light module of claim 30, wherein the linear light source is a cold cathode fluorescent lamp.

32. (New) The back light module of claim 30, wherein the light incident surface forms a sidewall of the light guide plate.

33. (New) The plate light source of claim 29, wherein each of the plurality of transparent elements comprises a first solid end extending up into an associated one of the notches in the bottom surface of the light guide plate and a second solid end extending out of the associated one of the notches below the bottom surface of the light guide plate.